

800kHz Synchronous Step-up Converter with 6A Switches

Description

The MT5033 devices provide a power supply solution for products powered by either a one-cell Li-Ion or Li-polymer battery. The converter generates a stable output voltage that is either adjusted by an external resistor divider or fixed internally on the chip. It provides high efficient power conversion and is capable of delivering output currents up to 2.5A at 5V at a supply voltage down to 3V. The maximum peak current in the step-up switch is limited to a value of 6A. The MT5033 operates at 800kHz switching frequency and enters pulse-skip-mode (PSM) operation at light load currents to maintain high efficiency over the entire load current range. During shutdown, the load is completely disconnected from the battery.

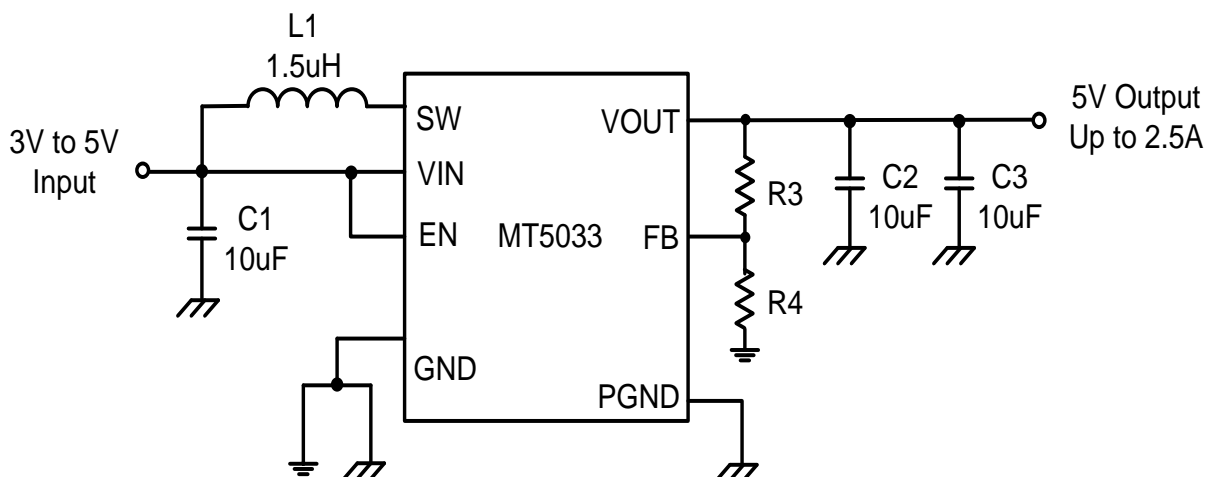
Features

- Synchronous Step-up Converter with 2.5A Output Current From 3V Input
- Wide VIN Range From 2.9V to 5.5V
- Input Under-voltage Lockout Protection
- Fixed and Adjustable Output Voltage
- Built-in Output Over-voltage Protection
- Light-Load Pulse Skip Mode
- Load Disconnect During Shutdown
- Output Short Circuit Protection
- Thermal Shutdown Protection
- Pb-Free(ROHS compliant)
- Available in a SOP8_EP Packages

Applications

- Power Bank
- USB Charging Port (5V)
- DC/DC Micro Modules

Typical Application



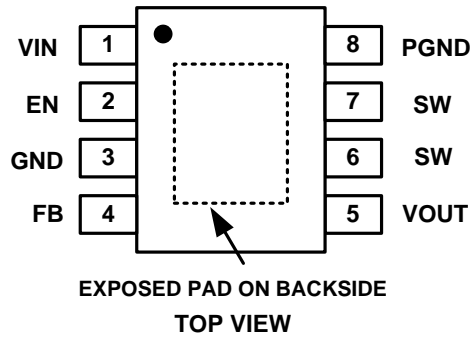
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Ordering Information

Part No.	Marking	Temp. Range	Package	Remark	MOQ
MT5033NSPR	MT5033 YWWXX	-40°C ~+85°C	SOP8L_EP		2500/Tape & Reel

Note: Y: Year, WW: Week, XX: Control Code

Pin Configuration



Pin Description

NAME	PIN NO.	DESCRIPTION
VIN	1	Input Supply voltage
EN	2	Enable input. (1/VIN enabled, 0/GND disabled)
GND	3	Analog Ground pin. Connect GND to PGND under EP.
FB	4	Voltage feedback of adjustable versions. Connect FB to GND and set fixed 5.15V output voltage.
VOUT	5	Step-up convert output
SW	6, 7	Step-up and rectifying switch input
PGND	8	Power Ground pin.
EP		Exposed pad must be soldered to achieve appropriate power dissipation. Connect EP to GND.